

1 This listing of claims will replace all prior versions, and listings, of claims
2 in the application.

3
4 **Listing of Claims:**

5
6 Claim 1 (Currently amended): A method of synchronizing asynchronous
7 time-based and motion capture data in a system in which the time-based data and
8 the motion data are transmitted as multiple data streams by [[a]] one or more
9 servers over a network to a client, the method comprising:

10 retrieving a time-based data stream and a motion capture data stream at the
11 one or more [[the]] servers, each stream comprising frames of data;

12 variably buffering one of the time-based data stream and the motion capture
13 data stream at each of the one or more [[the]] servers to produce output data
14 [[two]] data streams sent from the one or more servers, wherein the output data
15 streams having have synchronized frames;

16 receiving as inputs the output data streams from the one or more servers at
17 the client;

18 multicasting separately the two streams; and

19 synchronizing the output data streams at the using the synchronized frames
20 at the client for playback of synchronized motion capture data and time-based data
21 to a user.

22
23 Claim 2 (Canceled)

1 Claim 3 (Currently amended): The method of claim 1 further including
2 calculating a difference between delays for the motion capture data stream and the
3 time-based data stream ~~through~~ at each of the one or more [[the]] servers to
4 determine an amount of variable buffering for a faster of the two streams.
5

6 Claim 4 (Original): The method of claim 1 further including transferring
7 only those data values for a frame that have changed since a last frame was
8 transmitted.
9

10 Claim 5 (Original): The method of claim 1 wherein the network is the
11 Internet.
12

13 Claim 6 (Previously presented): The method of claim 1 wherein the
14 motion capture data is mapped to control the movement of a virtual figure
15 displayed in a scene at the client.
16

17 Claim 7 (Previously presented): The method of claim 1 wherein the
18 motion capture data is generated by a body suit.
19

20 Claim 8 (Previously presented): The method of claim 1 wherein the
21 motion capture data includes background data for use in producing a scene at the
22 server.
23
24
25

1 Claim 9 (Previously presented): The method of claim 1 wherein data
2 transfer from the server to the client is concurrent with the receipt of the time-
3 based data stream and motion capture data stream at the server.

4
5 Claim 10 (Original): The method of claim 1 wherein the time-based data is
6 voice data.

7
8 Claim 11 (Original): The method of claim 1 wherein the synchronized data
9 frames include one or more data channels, the server transmitting on the network
10 at a predetermined interval between synchronized data frames a descriptor packet
11 which describes each channel contained in the synchronized data frames such that
12 a client may join in progress a multicast of synchronized data frames.

13
14 Claim 12 (Previously presented): The method of claim 1 wherein the time-
15 based data is a pre-recorded audio track and the method further includes
16 synchronizing playback of the pre-recorded audio track at the server and buffering
17 of the pre-recorded audio track to allow for coupling with motion capture data
18 generated in time with the playback of the pre-recorded audio track.

19
20 Claim 13 (Original): The method of claim 1 further including sequencing
21 synchronized frames output from the server to the client to provide for ordered
22 playback of the synchronized frames to a user at the client.

1 Claim 14 (Currently amended): A method of packaging synchronized
2 frames of three-dimensional motion data and time-based data where each frame
3 includes one or more channels of data in a system in which synchronized frames of
4 three-dimensional motion data and time-based data are transmitted by as data
5 streams by one or more [[a]] servers over a network to a client, the method
6 comprising:

7 storing a last data value for each channel in each synchronized frame of
8 three-dimensional motion data and time-based data transmitted over the network;

9 retrieving new synchronized frames of three-dimensional motion data and
10 time-based data for transmission over the network; [[and]]

11 packaging and transmitting ~~through separate streams~~ over the network only
12 data for channels having changed data values; and

13 synchronizing at the client, the data streams received from the one or more
14 servers.

15
16 Claim 15 (Original): The method of claim 14 further including transmitting
17 a descriptor packet at a predetermined interval over the network, the descriptor
18 packet including channel descriptors for each channel in the synchronized frames.

19
20 Claim 16 (Canceled)

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22 Claim 17 (Canceled)

23
24 Claim 18 (Canceled)

1 Claim 19 (Currently amended): A method for playing back time-based
2 and motion capture data that has been synchronized and received as multiple input
3 data separate streams from one or more servers of data comprising:

4 synchronizing the multiple input data streams;

5 mapping [[the]] motion capture data received in ~~one or more of the separate~~
6 the input data streams to control the movement of a virtual figure in a scene
7 displayed at a client; and

8 playing back in synchronization with movement of the virtual figure the
9 time-based data received in ~~one or more of the separate~~ input data streams.

10
11 Claim 20 (Currently amended): A method of synchronizing asynchronous
12 three-dimensional motion data and audio data at a server computer in a system in
13 which the three-dimensional motion data and the audio data are transmitted as
14 multiple inputs by one or more through separate streams by the server computers to
15 one or more clients, the clients providing a real time output of synchronized
16 motion and audio data, the method comprising:

17 retrieving an audio stream ~~of the separate streams~~ including voice data and
18 a three-dimensional motion data stream of the separate streams including one or
19 more motion data channels at the server, each stream including frames of data;

20 calculating a delay through the one or more server computers for a frame of
21 data on each of the streams;

22 calculating a difference between the delay for the audio stream and the
23 three-dimensional motion data stream to determine which of the two streams is
24 faster;

1 variably buffering a faster of the streams to synchronize the audio stream
2 and the three-dimensional motion data stream resulting in two output streams
3 having synchronized data frames;

4 packaging the synchronized data frames;

5 multicasting the synchronized data frames as multiple data streams that are
6 the multiple inputs to one or more clients over a network; and

7 at each client computer, synchronizing the multiple data streams using the
8 synchronized data frames for synchronous playback of the audio and three-
9 dimensional motion data for display to a user.

10
11 Claim 21 (Previously presented): The method of claim 1 wherein the
12 motion capture data is sensor data.

13
14 Claim 22 (Previously presented): The method of claim 14 wherein the
15 three-dimensional motion data is sensor data.

16
17 Claim 23 (Canceled)

18
19 Claim 24 (Previously presented): The method of claim 19 wherein the
20 motion capture data is sensor data.

21
22 Claim 25 (Previously presented): The method of claim 20 wherein the
23 three-dimensional motion data is sensor data.

24
25 Claim 26 (Canceled)

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2 Claim 27 (Canceled)

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4 Claim 28 (Canceled)

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6 Claim 29 (Canceled)

7
8 Claim 30 (Canceled)

9
10 Claim 31 (New): The method of claim 1 wherein the motion capture data
11 includes a time stamp.

12
13 Claim 32 (New): The method of claim 14 wherein the three-dimensional
14 motion data includes a time stamp.

15
16 Claim 33 (New): The method of claim 19 wherein the motion capture data
17 includes a time stamp.

18
19 Claim 34 (New): The method of claim 20 wherein the three-dimensional
20 motion data includes a time stamp.